1067-20 Effectiveness of Maze Procedure for Patients With Giant Left Atrium Associated With Mitral Valvular Disease

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Background: Although the Maze procedure has been effective to restore sinus rhythm in most patients with chronic atrial fibrillation (Af), it is unknown whether this procedure is effective for restoring significant atrial contraction even in patients with giant left atrium (GLA).

Methods: We echocardiographically studied 19 patients with GLA (G(+), age, 57 ± 11 years) and 32 patients without GLA (G(−), age, 59 ± 8 years, p = NS) before and after surgery. (mean, 2.5 ± 2.5 months). The peak velocity (Av, cm/s) and time-velocity integral (Ai, cm) of late diastolic filling wave (A-wave) were measured from transmitral flow recordings. Atrial filling fraction (AFF, %) was calculated as a fraction of Ai to time velocity integral of total diastolic filling. We considered the presence of P wave in ECG indicating significant atrial electrical activity and Av more than 10 cm/s indicating significant atrial mechanical activity.

Results:

	P-wave	A-wave	Af	Av	Ai	AFF
G(+)	8 (42%)	4 (21%)	9 (47%)	52 ± 24	5 ± 0	19 ± 6
G(−)	27 (84%)	21 (66%)	4 (13%)	45 ± 14	5 ± 2	16 ± 4
	<0.01	<0.01	<0.01	NS	NS	NS

Conclusions: 1) Restration of electrical atrial activity was more frequent than that of mechanical atrial activity. 2) Although most patients without GLA restored significant electrical and mechanical activities by the Maze procedure, fewer patients with GLA could restore both of them. 3) However, once significant active contraction was resumed, the degree of contraction was comparable between patients with and without GLA. 4) The Maze procedure may be worth trying in patients with GLA.

1067-21 Fenfluramine Combination Therapy for Obesity: The Appearance Rate of Aortic Regurgitation on Serial Echoes Parallels the Incidence in a Larger Cohort Population

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Background: Fenfluramine is used to treat obesity, most often in combination with phentermine (fen/phen), but also alone or with mazindol (fen/maz). Fen/phen has recently been associated with an unusual thickening of right- and left-sided heart valves and valvular regurgitation (VR). This is the initial report of serial changes by echocardiogram-Doppler (ED) studies and of the prevalence of VR in a well-defined, systematically treated cohort.

Methods: Since 1994, 242 patients received fen/phen and or fen/maz for at least six months; 48 had baseline ED studies before treatment. Thus far, 137 of the total cohort have been re-studied by ED. Both color and continuous wave findings, confirmed by two echocardiographers, were required to establish VR.

Results: Two out of 17 (12%) patients with normal ED prior to treatment developed mild aortic regurgitation (AR) during treatment. Out of the 137 evaluated to date, 27 (20%) demonstrated trace to moderate AR. Abnormally bright echoes on the aortic valve line of closure were commonly observed. Additionally noted were mild mitral, mild to moderate tricuspid, and mild pulmonic VR.

Conclusions: Significant AR was observed in 20% of fen/phen - fen/maz recipients. The clinical significance, natural history, and need for therapeutic intervention deserve careful attention.

1067-22 Valvular Abnormalities in Asymptomatic Obese Individuals Receiving Fenfluramine and Phentermine: A Consecutive Series

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Background: The combination of fenfluramine and phentermine (F-P) has recently been shown to be associated with valvular abnormalities. The incidence of these abnormalities and the relation to dosage is not known. Historic control series have shown that in patients <59 yrs the prevalence of trace to mild (1+) mitral regurgitation (MR) is 0% to 34% and that for aortic regurgitation (AR) is 0% to 9% The purpose of this study was to assess the frequency of valvular abnormalities in a consecutive series of patients receiving the combination of F-P.

Methods: Nineteen consecutive, unselected, asymptomatic individuals receiving F-P were evaluated with echocardiography. Sixteen were women, the mean age was 43 ± 10 years and the mean weight was 119 ± 26 kg. The average duration of therapy was 10 ± 5 months. No one had suspected cardiac disease.

Results: Mitral valvular abnormalities were most common and present in 13 (68%) patients (pts.) of whom eight (42%) had characteristic mitral chordal or diffuse mitral valve thickening in association with the MR. One pt. (5%) had moderate MR, eleven pts. (58%) had mild or trace MR. One pt. (5%) had moderate AR, five pts. (26%) had mild or trace AR. Three pts.(16%) had thickening of the aortic leaflets in association with the AR. Twelve pts. (63%) had mild or trace tricuspid regurgitation. There was no apparent relation between length of therapy and severity of disease.

Conclusion: Valvular abnormalities are common in individuals receiving F-P. The observed rates, as well as the severity of the abnormalities, far exceed the expected rates. Valvular and chordal thickening is characteristic and distinguishes these patients from normal controls who have structurally normal valves in association with regurgitation. Close follow-up is needed to define a risk- benefit ratio.

1068 Valvular Heart Surgery

Monday, March 30, 1998, 3:00 p.m.–5:00 p.m.
Georgia World Congress Center, West Exhibit Hall Level
Presentation Hour: 3:00 p.m.–4:00 p.m.

1068-41 Chordal Preservation Does Not Influence Left Ventricular Diastolic Function Immediately Following Mitral Valve Replacement

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Background: Preservation of the mitral subvalvular apparatus helps maintain left ventricular (LV) systolic performance following MVR for chronic MR, but whether chordal preservation is advantageous for diastolic function in the immediate post-operative period is unclear.

Methods: Eleven dogs underwent left thoracotomy and placement of 20 myocardial markers to assess LV volume and wall stress. Acute MR was created by puncturing the posterior leaflet with a Cope biopsy needle. After 12 weeks, MVR with chordal preservation was performed, followed by biplane videofluoroscopic studies with the chordae tendinae intact (CI) and after chordal severing (CS) by wire snare. Diastolic function was assessed by the time constant and maximum time derivative of isovolumic pressure decay (τ,-dP/dt), time constant of isovolumic wall stress decay (τ_s), time of filling (TF), peak filling rate (PFR), and time to PFR (TPFR).

Results: No statistically significant differences were observed when all chordae were severed (Table).

*[mean ± SD, P = N.S. by ANOVA].

	τ* (ms)	τ_s* (ms)	(−)dP/dt* (mmHg/s)	TF* (ms)	PFR* (ml/ms)	TPFR* (ms)
MVR-CI	45.2±7.9	44.9±7.9	−1691.6±682.4	189.2±43.5	45.6±15.5	583.7±103.7
MVR-CS	47.6±8.2	47.0±8.2	−1546.9±577.3	189.2±48.3	45.1±13.8	568.9±136.8

Conclusion: LV diastolic function immediately following MVR is unaffected by chordal severing in this canine model of chronic MR.

1068-42 An Encouraging Decade for Mitral Regurgitation Surgery

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Objective: To review the 10 year experience for mitral regurgitation in one UK centre.

Methods: Between 1986 and 1997, 710 patients with mitral regurgitation underwent surgery in our unit. (388 males, 322, mean age 63 (7–85).

Results: The aetiology of mitral valve dysfunction, operative procedure and (30 day mortality) are shown below. A miscellaneous group of 23 is not shown in the table.

Operation	Degen	I.E.	Schemic	Rheumatic
Replace (alone)	125 (1)	46 (1)	13 (1)	136 (7)
Repair (alone)	127 (0)	8 (0)	4 (0)	6 (0)
Replace + other	33 (1)	10 (0)	27 (1)	66 (5)
Repair + other	38 (2)	7 (1)	32 (2)	9 (1)

Total operative mortality was 30 (4.2%). There were no operative deaths with repair alone. Preoperative NYHA class ($P < 0.0003$) and regurgitant